Discussion

- Transition plan issues need to be addressed
- Need to identify the scope of communications
- Ground Co-site Problem identified and being addressed by FAA as one of the 25 identified initiatives.
  - Multicast vs. selective keying variations at ARTCCs
- Reduce 500 KHz guard band
  - Appropriate for current half duplex system, a challenge to reduce
  - FAA tech center investigation into cancellation system, what is the delay?
  - Should the 500 khz guard band be reevaluated?
    - Other techniques need to be investigated at receiver/transmitter end
- How does antenna separation affect guard band. Better when xmit/rcv sites are separated
- Dynamic power control – new system – has significant transition
- NASA should contact tech center (visit 8/30), NTIA papers on coverage/utilization
- CDMA has line of sight constraints separate from cellular system
- Objective of sub-project is to sustain/maintain current system

Discussion

- Future system: half duplex vs full duplex as presented on day 1 should be evaluated
  - Conops and transition plan needed
  - RTCA studies/reports (e.g. DO-224 - VDL-3)
  - Full duplex case needs to be made
- fbuck@mitre.org will provide report
- Solving A/C co-site antenna issue will not improve VHF assignments
- Required applications means simultaneous service and multiple antennas
  - Reconfig antennas will not solve this

Discussion

What are key performance parameters for VHF communication systems that require further characterization?

- Need to assess voice acceptability – vocoders – digital voice. How to quantify? Tech center is studying. Acceptance of results
- Sharpening transmit shoulders
- Need to quantify the amount of interference as a function of duty cycle
- Future: quantifying the interference reduction potential of time gated signals
- Mixer technology investigation to reduce cross modulation.
- Directive ground site antennas should be revisited – dropped by FAA as an initiative due to costs – are there new lower cost technologies?